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Cooperative Flax Trials

in the Spring Flax Region—1979

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COOPERATING AGENCIES, STATIONS, AND PERSONNEL
NORTH CENTRAL REGION, SCIENCE AND EDUCATION ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE

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Cooperative Flax Trials in the Spring Flax Region—1979¹

Jerry F. Miller, James J. Hammond, and Thomas J. Gulya²

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Agronomists and plant pathologists in the United States and Canada who are interested in flax improvement have cooperated by growing the Regional Flax Nurseries from which the data in this report have been compiled. A list of the cooperating agencies and personnel is given on page 2. The writers of this report wish to express their sincere appreciation to individuals who undertook to grow one or more of these nurseries during the past 41 years.

REGIONAL VARIETAL TRIALS IN 1979

The Cooperative Regional Nursery in 1979 consisted of varieties grown in nurseries at 14 locations. The varieties included in the trials are listed in table 1, and the stations from which data were obtained are given in table 2.

This report covers agronomic, disease, and seed quality data reported from the stations in 1979. The Cooperative Regional Nursery has been grown for 41 years from 1939 to 1979, and data have been reported from a total of 1,126 trials. A total of 277 varieties or selections have been grown for 1 or more years.

All data are reported in the metric system. Several conversion factors are shown to aid in converting figures to the other system.

Conversion Factors

$$0.777 \times \text{g/l} = \text{lb/bu}$$

$$.892 \times \text{kg/ha} = \text{lb/A}$$

$$.01593 \times \text{kg/ha} = \text{bu/A}$$

$$\text{NMR Reading/wt. of sample/constant} = \text{Oil \%}$$

¹ Joint progress report of cooperative investigations by the State Agricultural Experiment Stations, Canadian Department of Agriculture, Canadian Province Universities, and the U.S. Department of Agriculture that contains preliminary data, interpretation of which may be modified by additional experimentation.

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TABLE 1.—VARIETIES OF FLAX GROWN IN COOPERATIVE REGIONAL NURSERIES IN 1979

VARIETY OR CROSS	C.I. NUMBER	SOURCE	YEAR ENTERED
BISON(CHECK)	389	NCRTH DAKOTA	1927
LINOTT(CHECK)	2522	OTTAWA,ONT.	1967
CULBERT	2776	MINNESOTA	1972
DUFFERIN(REDWOOD 65 X FP 441)	2814	MANITOBA	1975
N713 LINOTT/CI2538	2887	NCRTH DAKOTA	1978
N714 LINOTT/CI2538	2888	NORTH DAKOTA	1978
N715 LINOTT/CI2538	2889	NCRTH DAKOTA	1978
M3P3 92 LINOTT/BIS M3//LINOTT/BIS P32894	2894	NCRTH DAKOTA	1978
181 ..	2895	NCRTH DAKOTA	1978
704 ..	2896	NCRTH DAKOTA	1978
1067 ..	2897	NCRTH DAKOTA	1978
N813 M3P3 1025 ..	2908	NCRTH DAKOTA	1979
N817 M3P3 2747 ..	2909	NCRTH DAKOTA	1979
N804 CULBERT/BISCN M3M3P3P3	2910	NCRTH DAKOTA	1979
N807 ..	2911	NCRTH DAKOTA	1979
N829 BR/NORED//LINOTT	2912	NCRTH DAKOTA	1979
N832 BR/NORED//LINOTT	2913	NORTH DAKOTA	1979
N833 BR/NORED//LINOTT	2914	NORTH DAKOTA	1979
N847 HIOIL 11 X 3//LINOTT	2915	NCRTH DAKOTA	1979
N850 WDM/BIS 70//LINOTT	2916	NCRTH DAKOTA	1979
M811 1074R CULBERT/S017(HIO)	2917	MINNESOTA	1979
M815 1954H CULBERT/S088	2918	MINNESOTA	1979
M816 2005H CULBERT/S088	2919	MINNESOTA	1979
M818 77-7062R CULBERT/S088	2920	MINNESOTA	1979
FP692 FP535/REDWOOD 65	2921	MANITOBA	1979
ADDITIONAL VARIETIES*****			

TABLE 2.—AVERAGE YIELDS OF SEED, LEAST SIGNIFICANT DIFFERENCES, AND PAGE NUMBERS OF DATA TABLES FROM COOPERATING STATIONS IN 1979

STATION	AVG. YIELD KG/HA	LSD (0.05)		PAGE NO. OF TABLE
		KG	PERCENT	
MINNESOTA				
ST. PAUL (EARLY)	2068	414	20	3
LAMBERTON (EARLY)	1906	273	14	3
MORRIS (EARLY)	1964	173	9	3
MORRIS (LATE)	2061	396	19	4
CROOKSTON (EARLY)	2368	330	14	4
STEPHEN (EARLY)	1711	373	22	4
SOUTH DAKOTA				
BROOKINGS	2436	225	9	5
NORTH DAKOTA				
FARGO (EARLY)	1383	184	13	5
FARGO (LATE)	1259	346	27	5
MINOT (EARLY)	928	354	38	6
LANGDON (EARLY)	1412	235	17	6
MANITOBA				
MORDEN (EARLY)	2192	212	10	6
MORDEN (LATE)	2041	284	14	7
WINNIPEG (EARLY)	1622	235	14	7
SASKATCHEWAN				
SASKATOON (EARLY)	1219	156	13	7
MONTANA				
SIDNEY	705	136	19	8

LEAST SIGNIFICANT DIFFERENCE

Plot size and number of replications of the different tests varied, but most plots were near 5 m long with three replications. Least significant differences at the 5 percent point have been calculated for all stations. Average seed yields of the various tests, together with the least significant differences calculated both in kilograms and in percent of the mean, are shown in table 2.

Agronomic data from 17 nurseries by 14 stations are shown in table 3. Varieties are listed in systematic order with a column indicating yield rank. Included with the experimental varieties were four check varieties (Bison, Linott, Culbert, and Dufferin). Additional varieties were included at a number of stations. In table 5 the comparative yield of all varieties at all stations is shown as percent of checks.

TABLE 3.— YIELD AND OTHER DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS IN 1979 AT DIFFERENT LOCATIONS

ST. PAUL, MINNESOTA (EARLY)					SEEDED 4/26		HARVESTED		1.48999977		SQUARE METERS			
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L G	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	ICCINE VALUE	YIELD		%
		FIRST BLOOM	FULL BLOOM									MATURITY	RANK	
389	36	53										22	1765	82
2522	12	54										20	1845	86
2776	7	52										10	2149	100
2814	4	55										3	2458	115
2887	2	53										2	2516	117
2888	2	53										16	1582	52
2889	2	52										15	1993	93
2894	2	54										17	1919	85
2895	2	56										25	1664	78
2896	2	57										8	2190	102
2897	2	55										14	2020	94
2908	1	54										11	2136	100
2909	1	55										19	1868	87
2910	1	52										18	1868	88
2911	1	56										12	2120	95
2912	1	55										9	2174	101
2913	1	55										5	2255	105
2914	1	57										6	2217	103
2915	1	55										7	2192	102
2916	1	53										23	1744	81
2917	1	55										13	2046	95
2918	1	52										24	1668	78
2919	1	48										21	1791	83
2920	1	51										4	2416	113
2921	1	55										1	2673	125
STATION AVERAGE 2068 KG PER HECTARE; LSD(.05) = 414 KG/HA. ; F = 3.3020														

LAMBERTON, MINNESOTA					(EARLY)	SEEDED 5/15 HARVESTED				1.48999577 SQUARE METERS				
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L G	W I	W L	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM									MATURITY	RANK	KG PER HA
389	17	46		67	3							24	1532	80
2522	10	44		65	2							17	1856	97
2776	8	44		63	3							5	2064	106
2814	5	50		78	4							7	1995	105
2887	2	44		63	2							3	2058	110
2888	2	47		66	3							15	1901	100
2889	2	42		63	2							6	2042	107
2894	2	45		63	3							23	1592	83
2895	2	44		65	3							22	1722	90
2896	2	46		64	3							8	1986	104
2897	2	46		69	3							21	1738	91
2908	1	45		71	3							20	1780	93
2909	1	46		77	3							16	1895	95
2910	1	48		74	5							14	1526	101
2911	1	48		81	5							25	1523	80
2912	1	45		69	4							4	2071	108
2913	1	44		70	4							13	1546	102
2914	1	46		74	2							19	1847	97
2915	1	47		64	2							11	1955	103
2916	1	46		71	3							18	1852	97
2917	1	46		76	4							2	2154	113
2918	1	46		62	4							12	1955	102
2919	1	43		63	3							9	1975	103
2920	1	45		69	5							10	1973	103
2921	1	51		76	3							1	2248	118
STATION AVERAGE 1906 KG PER HECTARE; LSD(.05) = 273 KG/HA. ; F = 3.5132														

MORRIS, MINNESOTA					(EARLY)	SEEDED 5/18				HARVESTED		1.48999977				SQUARE METERS	
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L D	W L	W I	TEST WT	1000 SEED WT	OIL %	100INE VALUE	YIELD		%			
		FIRST BLOOM	FULL BLOOM									RANK	PER HA				
														CHECKS			
389	39	49	59	58								25	1344	72			
2522	12	45	54	54								9	2040	109			
2776	7	45	52	52								18	1541	103			
2814	4	49	57	63								21	1512	102			
2887	2	45	51	56								1	2156	115			
2888	2	46	52	55								11	2002	107			
2889	2	44	50	52								5	2058	110			
2894	2	46	52	58								17	1555	104			
2895	2	47	53	55								20	1923	102			
2896	2	48	55	56								4	2076	111			
2897	2	47	55	56								19	1939	103			
2908	1	46	62	57								8	2046	109			
2909	1	47	54	57								13	1995	106			
2910	1	45	53	59								5	2058	110			
2911	1	48	59	65								24	1778	95			
2912	1	47	54	59								2	2105	112			
2913	1	48	55	58								10	2011	107			
2914	1	48	56	59								3	2082	111			
2915	1	48	56	58								15	1968	105			
2916	1	46	51	55								15	1968	105			
2917	1	48	56	57								23	1827	97			
2918	1	46	52	55								22	1852	95			
2919	1	43	51	53								7	2055	109			
2920	1	44	55	62								14	1988	106			
2921	1	49	56	61								11	2002	107			
STATION AVERAGE 1564 KG PER HECTARE; LSD(.05) = 173 KG/HA. ; F = 6.4361																	

TABLE 3.— YIELD AND OTHER DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS IN 1979 AT DIFFERENT LOCATIONS—CONTINUED

MORRIS, MINNESOTA (LATE)										SEEDED 6/1 HARVESTED 1.48999977 SQUARE METERS				
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L D	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM									RANK	KG PER HA	% CHECKS
389	25	50	55	68								25	1378	67
2522	12	47	52	63								8	2221	102
2776	7	48	54	66								10	2143	105
2814	3	52	57	76								15	1561	96
2887	2	48	53	65								2	2541	124
2888	2	45	54	70								5	2355	115
2889	2	45	50	65								1	2552	125
2894	2	45	55	70								24	1751	85
2895	2	48	54	64								18	1903	93
2896	2	50	54	66								3	2369	116
2897	2	48	54	65								4	2362	115
2908	1	48	54	67								11	2131	104
2909	1	49	55	66								13	2096	102
2910	1	49	54	66								24	1796	88
2911	1	50	55	71								19	1843	90
2912	1	49	54	69								20	1829	89
2913	1	49	54	69								9	2156	105
2914	1	49	54	67								17	1548	95
2915	1	49	54	69								16	1959	96
2916	1	48	53	68								21	1796	88
2917	1	50	56	69								23	1751	87
2918	1	49	54	66								14	2006	98
2919	1	45	51	64								7	2241	109
2920	1	45	54	75								12	2100	102
2921	1	52	47	74								6	2291	111

STATION AVERAGE 2061 KG PER HECTARE; LSD(.05) = 396 KG/HA. ; F = 3.8398

CROOKSTON, MINNESOTA (EARLY)										SEEDED 5/21 HARVESTED 1.48999977 SQUARE METERS				
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L D	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM									RANK	KG PER HA	% CHECKS
389	35	50		101	61	1						17	2277	96
2522	12	46		108	58	1						3	2702	113
2776	8	48		100	53	1						22	2098	82
2814	5	53		101	62	2						10	2456	105
2887	2	47		58	62	1						14	2340	98
2888	2	51		102	59	1						5	2543	107
2889	2	46		102	56	1						7	2536	106
2894	2	51		102	59	1						16	2286	96
2895	2	49		100	58	1						19	2225	93
2896	2	50		99	56	2						4	2552	107
2897	2	50		100	55	1						9	2498	105
2908	1	49		97	61	1						2	2722	114
2909	1	50		98	59	1						15	2319	97
2910	1	45		100	60	1						12	2472	104
2911	1	51		104	67	1						11	2476	104
2912	1	51		98	62	2						8	2523	106
2913	1	50		100	57	1						1	2874	121
2914	1	51		99	62	1						13	2422	102
2915	1	50		103	61	1						21	2201	92
2916	1	47		58	55	1						6	2539	107
2917	1	51		105	60	2						18	2252	95
2918	1	47		103	58	2						25	1769	74
2919	1	45		58	55	1						24	1888	79
2920	1	48		103	61	1						23	1953	82
2921	1	52		102	60	1						20	2214	93

STATION AVERAGE 2368 KG PER HECTARE; LSD(.05) = 330 KG/HA. ; F = 5.0064

STEPHEN, MINNESOTA (EARLY)										SEEDED 5/21 HARVESTED 1.85999966 SQUARE METERS				
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L D	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM									RANK	KG PER HA	% CHECKS
389	3											25	1222	78
2522	3											21	1646	105
2776	3											24	1516	97
2814	3											19	1659	106
2887	2											9	1781	114
2888	2											3	1892	121
2889	2											14	1704	109
2894	2											8	1790	114
2895	2											7	1799	115
2896	2											5	1815	116
2897	2											22	1634	104
2908	1											1	1908	122
2909	1											17	1664	106
2910	1											10	1729	110
2911	1											23	1594	102
2912	1											2	1897	121
2913	1											16	1668	107
2914	1											15	1688	108
2915	1											18	1661	106
2916	1											4	1876	120
2917	1											20	1652	106
2918	1											11	1725	110
2919	1											12	1715	110
2920	1											6	1811	116
2921	1											13	1711	109

STATION AVERAGE 1711 KG PER HECTARE; LSD(.05) = 373 KG/HA. ; F = 1.1671

TABLE 3.— YIELD AND OTHER DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN
REGIONAL TRIALS IN 1979 AT DIFFERENT LOCATIONS—CONTINUED

BROOKINGS, SOUTH DAKOTA (EARLY)										SEEDED 5/ 2 HARVESTED 1.95099926 SQUARE METERS						
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L O G	W I T	W I T	TEST WT G/L	1000 SEED GMS	OIL %	IODINE VALUE	YIELD				
		FIRST BLOOM	FULL BLOOM									MATURITY	KG PER HA	% CHECKS		
389	40	57		67								25	2164	91		
2522	13	56		64								20	2332	98		
2776	8	56		59								23	2279	96		
2814	5	59		64								1	2663	112		
2887	2	55		64								12	2461	103		
2888	2	57		58								22	2295	97		
2889	2	54		61								8	2513	106		
2894	2	57		62								5	2520	106		
2895	2	57		62								18	2373	100		
2896	2	55		60								7	2514	106		
2897	2	57		63								11	2466	104		
2908	1	57		61								21	2325	98		
2909	1	57		66								19	2345	99		
2910	1	57		65								13	2453	103		
2911	1	58		67								4	2557	107		
2912	1	57		63								3	2573	108		
2913	1	57		63								13	2453	103		
2914	1	59		67								6	2518	106		
2915	1	56		61								9	2508	105		
2916	1	57		63								15	2450	103		
2917	1	57		61								16	2431	102		
2918	1	55		61								17	2426	102		
2919	1	50		57								24	2221	93		
2920	1	57		69								10	2472	104		
2921	1	58		62								2	2574	108		
STATION AVERAGE 2436 KG PER HECTARE (LSD(.05) = 225 KG/HA. ; F = 2.2130																

FARGO, NORTH DAKOTA (EARLY)										SEEDED 5/23 HARVESTED 5.95999908 SQUARE METERS						
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L O G	W I T	W I T	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD			
		FIRST BLOOM	FULL BLOOM	MATURITY									KG PER HA	% CHECKS		
389	38				69							25	1233	88		
2522	12				65							4	1471	105		
2776	7				63							7	1423	101		
2814	5				72							1	1557	111		
2887	2				65							19	1336	95		
2888	2				65							15	1363	97		
2889	2				63							23	1274	91		
2894	2				67							12	1383	95		
2895	2				63							14	1364	97		
2896	2				60							5	1460	104		
2897	2				63							11	1397	100		
2908	1				67							21	1315	94		
2909	1				68							10	1400	100		
2910	1				68							9	1408	100		
2911	1				74							6	1438	102		
2912	1				68							8	1420	101		
2913	1				67							2	1531	105		
2914	1				66							17	1347	96		
2915	1				70							22	1312	93		
2916	1				66							18	1335	95		
2917	1				66							16	1353	96		
2918	1				65							20	1320	94		
2919	1				63							24	1260	90		
2920	1				69							13	1378	98		
2921	1				67							3	1472	105		
STATION AVERAGE 1383 KG PER HECTARE (LSD(.05) = 184 KG/HA. ; F = 1.4850																

FARGO, NORTH DAKOTA (LATE)										SEEDED 6/ 4 HARVESTED 1.48999977 SQUARE METERS									
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L O G	W I T	W I T	TEST WT G/L	1000 SEED WT GMS	OIL %	100INE VALUE	YIELD		RANK	KG PER HA	% CHECKS			
		FIRST BLOOM	FULL BLOOM									MATURITY	KG				%		
389	38	55		67								24	1028		84				
2522	10	53		73								21	1055		87				
2776	7	53		66								18	1147		94				
2814	4	60		77								1	1555		128				
2887	2	51		74								11	1303		107				
2888	2	54		72								4	1473		121				
2889	2	51		69								9	1374		113				
2894	2	55		72								19	1102		91				
2895	2	53		72								15	1184		97				
2896	2	55		66								13	1233		101				
2897	2	54		72								22	1031		85				
2908	1	54		70								16	1152		95				
2909	1	53		71								20	1092		90				
2910	1	54		71								12	1291		106				
2911	1	56		79								3	1476		121				
2912	1	54		76								14	1201		99				
2913	1	53		79								5	1471		121				
2914	1	56		77								7	1407		116				
2915	1	53		75								2	1505		124				
2916	1	53		75								8	1385		114				
2917	1	53		75								10	1310		108				
2918	1	53		73								17	1151		95				
2919	1	49		66								24	1028		84				
2920	1	51		73								5	1471		121				
2921	1	56		70								23	1030		85				
STATION AVERAGE 1259 KG PER HECTARE (LSD(.05) = 346 KG/HA. ; F = 2.0528																			

TABLE 3.— YIELD AND OTHER DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN
REGIONAL TRIALS IN 1979 AT DIFFERENT LOCATIONS—CONTINUED

MINOT, NORTH DAKOTA (EARLY)										SEEDED 6/12 HARVESTED 1.48999977 SQUARE METERS						
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L D G	W I L T	W I L T	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD				
		FIRST BLOOM	FULL BLOOM									MATURITY	RANK	KG PER HA	% CHECKS	
389	24	35		58								8	1030	115		
2522	10	34		54								17	859	96		
2776	7	34		51								22	833	93		
2814	3	40		53								19	848	94		
2887	2	38		55								13	915	102		
2888	2	35		52								7	1033	115		
2889	2	36		52								9	947	105		
2894	2	36		53								17	859	96		
2895	2	36		51								23	818	91		
2896	2	34		52								1	1125	125		
2897	2	36		53								24	785	87		
2908	1	36		55								12	924	103		
2909	1	34		57								19	848	94		
2910	1	38		51								6	1035	115		
2911	1	40		60								10	934	104		
2912	1	34		54								21	845	94		
2913	1	41		55								10	934	104		
2914	1	40		53								25	672	75		
2915	1	34		56								3	1045	116		
2916	1	40		53								16	901	100		
2917	1	40		55								14	907	101		
2918	1	33		55								4	1040	116		
2919	1	34		55								2	1095	122		
2920	1	36		54								5	1036	115		
2921	1	42		54								15	902	100		
STATION AVERAGE 928 KG PER HECTARE; LSD(.05) = 354 KG/HA.; F = 0.7304																

STATION AVERAGE 928 KG PER HECTARE; LSD(.05) = 354 KG/HA. ; F = 0.7304

LANGDON, NORTH DAKOTA (EARLY)										SEEDED 5/31 HARVESTED 5.95999908 SQUARE METERS									
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO				HEIGHT CM	L D	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD					
		FIRST BLOOM	FULL BLOOM	MATURITY	KG PER HA									% CHECKS					
389	3	45			61					65			18	1289	95				
2522	3	47			58					65			24	1106	82				
2776	3	47			55					66			9	1479	109				
2814	3	53			71					64			5	1646	122				
2887	1	53			61					64			20	1244	92				
2888	1	50			61					64			8	1485	110				
2889	1	49			56					64			10	1469	105				
2894	1	51			60					64			19	1255	93				
2895	1	50			56					66			11	1443	107				
2896	1	51			58					66			7	1611	119				
2897	1	52			58					63			22	1125	83				
2908	1	49			58					65			17	1258	96				
2909	1	49			64					65			21	1243	92				
2910	1	52			64					65			4	1666	123				
2911	1	52			73					62			6	1636	121				
2912	1	50			64					65			25	1105	82				
2913	1	50			60					65			1	1758	130				
2914	1	53			58					60			16	1342	95				
2915	1	52			58					63			14	1384	102				
2916	1	49			65					64			12	1415	105				
2917	1	49			61					64			15	1347	100				
2918	1	52			60					60			13	1410	104				
2919	1	48			52					61			23	1123	83				
2920	1	45			65					62			2	1705	126				
2921	1	46			64					60			3	1681	124				
STATION AVERAGE 1412 KG PER HECTARE : LSD (.05) = 235 KG/HA. : F = 5.8517																			

STATION AVERAGE 1412 KG PER HECTARE; LSD(.05) = 235 KG/HA. ; F = 5.8517

MORDEN, MANITOBA (EARLY)										SEEDED 6/ 5 HARVESTED 3.06799984 SQUARE METERS									
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L D	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD			RANK	PER HA	CHECKS		
		FIRST BLOOM	FULL BLOOM									MATURITY	KG	%					
389	35	42	102	71	5							25	1901		88				
2522	10	41	100	69	2							8	2295		106				
2776	8	42	102	70	2							16	2137		99				
2814	5	48	106	78	2							15	2170		100				
2887	2	41	100	71	2							5	2340		108				
2888	2	44	100	76	3							19	2050		95				
2889	2	40	100	65	2							13	2222		102				
2894	2	43	101	71	3							6	2317		107				
2895	2	41	99	71	2							4	2345		108				
2896	2	42	98	70	2							2	2377		110				
2897	2	40	101	71	4							17	2131		98				
2908	1	41	103	71	3							11	2238		103				
2909	1	42	100	71	3							22	2015		93				
2910	1	43	104	73	4							24	1917		88				
2911	1	44	106	79	6							21	2032		94				
2912	1	41	104	71	5							10	2249		104				
2913	1	41	105	72	6							23	2008		93				
2914	1	44	100	74	1							7	2307		106				
2915	1	41	103	75	2							12	2226		103				
2916	1	41	101	72	3							3	2367		109				
2917	1	42	102	72	2							9	2263		104				
2918	1	42	104	72	6							20	2042		94				
2919	1	38	101	67	2							14	2213		102				
2920	1	38	104	78	4							18	2130		98				
2921	1	48	104	75	1							1	2487		115				
STATION AVERAGE 2192 KG PER HECTARE; LSD(.05) = 212 KG/HA. ; F = 4.1010																			

STATION AVERAGE 2192 KG PER HECTARE; LSD(.05) = 212 KG/HA. ; F = 4.1010

TABLE 3.— YIELD AND OTHER DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN
REGIONAL TRIALS IN 1979 AT DIFFERENT LOCATIONS—CONTINUED

MORDEN, MANITOBA					(LATE)	SEEDED 6/15 HARVESTED 3.06799984 SQUARE METERS									
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L D G	W I L	W I L	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM	MATURITY									RANK	KG PER HA	% CHECKS
389	19	41	104	71	2								23	1751	94
2522	10	39	103	64	1								14	2142	113
2776	8	40	107	63	1								18	2073	111
2814	5	50	117	75	1								24	1296	69
2887	2	40	103	69	1								15	2102	113
2888	2	42	113	73	1								19	1963	105
2889	2	39	104	64	1								1	2328	125
2894	2	43	105	69	1								16	2078	111
2895	2	40	103	66	1								4	2216	119
2896	2	43	104	64	1								3	2232	120
2897	2	41	104	67	1								12	2133	114
2908	1	40	104	67	1								13	2128	114
2909	1	40	104	71	1								20	1953	105
2910	1	42	114	73	1								21	1915	103
2911	1	43	117	81	1								25	1294	69
2912	1	41	110	71	1								17	2074	111
2913	1	41	109	68	1								7	2165	116
2914	1	43	113	74	1								22	1905	102
2915	1	40	113	72	1								6	2182	117
2916	1	40	104	68	3								10	2150	115
2917	1	42	111	67	1								8	2158	116
2918	1	42	111	66	1								11	2142	115
2919	1	36	107	63	1								2	2310	124
2920	1	37	115	76	1								5	2210	118
2921	1	47	114	74	1								9	2152	115
STATION AVERAGE 2041 KG PER HECTARE; LSD(.05) = 284 KG/HA. ; F = 6.6137															

WINNIPEG, MANITOBA (EARLY)						SEEDED 5/24 HARVESTED 3.06569958 SQUARE METERS									
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L D G	W I L	W I L	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM	MATURITY									RANK	KG PER HA	% CHECKS
389	27	43	52	70									25	1388	87
2522	10	43	52	67									9	1678	105
2776	8	43	52	63									18	1578	99
2814	5	47	56	71									2	1814	114
2887	2	44	53	67									21	1512	95
2888	2	45	53	71									23	1436	90
2889	2	44	54	63									22	1447	91
2894	2	44	52	64									7	1705	107
2895	2	45	53	66									24	1417	89
2896	2	45	54	63									4	1722	108
2897	2	44	53	64									20	1529	96
2908	1	44	53	64									1	1888	118
2909	1	44	53	71									12	1643	103
2910	1	45	53	67									17	1590	100
2911	1	46	55	71									19	1564	98
2912	1	45	54	63									3	1752	110
2913	1	45	54	64									15	1594	100
2914	1	45	54	64									10	1672	105
2915	1	45	54	67									13	1629	102
2916	1	43	52	64									8	1679	105
2917	1	46	55	67									5	1721	108
2918	1	44	53	64									6	1710	107
2919	1	40	49	63									16	1591	100
2920	1	40	50	67									11	1667	105
2921	1	47	57	67									14	1617	101
STATION AVERAGE 1622 KG PER HECTARE; LSD(.05) = 235 KG/HA. ; F = 2.1813															

SASKATOON.						(EARLY)	SEEDED 5/25 HARVESTED				6.00699997 SQUARE METERS				
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L D G	W I L	W I L	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM	MATURITY									RANK	KG PER HA	% CHECKS
389	36	48	89	63						5			21	1156	95
2522	9	47	86	62						4			6	1270	104
2776	6	48	88	58						5			22	1139	93
2814	5	56	91	67						5			12	1233	101
2887	2	48	85	62						4			4	1295	106
2888	2	48	86	61						5			1	1377	113
2889	2	47	86	56						5			23	1109	91
2894	2	49	85	62						5			3	1308	107
2895	2	47	85	62						5			10	1238	102
2896	2	50	87	61						4			8	1244	102
2897	2	49	87	61						5			20	1158	95
2908	1	49	88	61						5			7	1247	102
2909	1	51	90	64						5			25	1051	86
2910	1	48	86	59						5			2	1334	109
2911	1	52	91	64						5			19	1179	97
2912	1	50	88	62						5			10	1238	102
2913	1	50	89	60						5			17	1207	99
2914	1	53	90	59						5			14	1212	99
2915	1	50	87	62						5			15	1211	99
2916	1	47	86	61						5			9	1239	102
2917	1	50	87	61						5			24	1097	90
2918	1	49	90	59						6			5	1273	104
2919	1	45	86	57						5			13	1229	101
2920	1	51	87	59						5			18	1203	99
2921	1	55	90	63						5			16	1208	99
STATION AVERAGE 1219 KG PER HECTARE; LSD(.05) = 156 KG/HA. ; F = 1.8032															

TABLE 3.— YIELD AND OTHER DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN
REGIONAL TRIALS IN 1979 AT DIFFERENT LOCATIONS—CONTINUED

SIDNEY .				(EARLY)			SEEDED 5/31			HARVESTED			5.95959908			SQUARE METERS	
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		FULL BLOOM	MATURITY	HEIGHT CM	L O G	W D T	W I T	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD RANK	KG PER HA	% CHECKS	
		FIRST BLOOM	FULL BLOOM														
389	4	40				59				63		423		24	607	54	
2522	4	38				54				64		428		25	578	89	
2776	4	38				55				63		432		18	671	103	
2814	4	47				62				64		428		20	664	102	
2887	2	35				54				63		420		11	724	112	
2888	2	39				57				64		416		9	730	113	
2889	2	39				52				63		422		21	659	102	
2894	2	39				56				64		424		5	766	118	
2895	2	39				55				63		423		19	667	103	
2896	2	40				51				64		422		1	859	132	
2897	2	35				57				64		430		3	778	120	
2908	1	39				55				64		422		7	742	114	
2909	1	39				57				64		424		12	704	109	
2910	1	38				58				64		413		6	751	116	
2911	1	39				61				63		420		15	680	105	
2912	1	40				58				65		418		8	732	113	
2913	1	40				55				64		424		17	673	104	
2914	1	40				56				64		438		2	790	122	
2915	1	40				56				64		416		13	700	108	
2916	1	39				55				65		421		10	727	112	
2917	1	40				56				63		440		23	620	96	
2918	1	39				57				62		455		4	776	120	
2919	1	39				55				63		445		14	694	107	
2920	1	37				58				63		432		22	643	99	
2921	1	47				61				64		415		16	677	104	
STATION AVERAGE 705 KG PER HECTARE; LSD(.05) = 136 KG/HA. ; F = 1.7259																	

TABLE 4.— SUMMARY OF SEED YIELD IN KILOGRAMS PER HECTARE FOR FLAX LINES GROWN IN COOPERATIVE REGIONAL NURSERIES IN 1979

NAME	NO	EARLY	LATE	TOTAL	RANK	AVERAGE	OVERALL
ST. PAUL	1765	1532	1844	3376	25	135	23
LAMBERT	1856	1656	2040	3696	15	136	15
MCRRIS	2064	1941	2255	4250	18	137	19
CRUCKSTON	2068	2056	2352	4416	2	138	9
CRUCKSTON	2069	2057	2356	4414	3	139	12
CRUCKSTON	2070	2058	2357	4415	4	140	14
CRUCKSTON	2071	2059	2358	4417	5	141	17
CRUCKSTON	2072	2060	2359	4419	6	142	19
CRUCKSTON	2073	2061	2360	4421	7	143	21
CRUCKSTON	2074	2062	2361	4423	8	144	23
CRUCKSTON	2075	2063	2362	4425	9	145	25
CRUCKSTON	2076	2064	2363	4427	10	146	27
CRUCKSTON	2077	2065	2364	4429	11	147	29
CRUCKSTON	2078	2066	2365	4431	12	148	31
CRUCKSTON	2079	2067	2366	4433	13	149	33
CRUCKSTON	2080	2068	2367	4435	14	150	35
CRUCKSTON	2081	2069	2368	4437	15	151	37
CRUCKSTON	2082	2070	2369	4439	16	152	39
CRUCKSTON	2083	2071	2370	4441	17	153	41
CRUCKSTON	2084	2072	2371	4443	18	154	43
CRUCKSTON	2085	2073	2372	4445	19	155	45
CRUCKSTON	2086	2074	2373	4447	20	156	47
CRUCKSTON	2087	2075	2374	4449	21	157	49
CRUCKSTON	2088	2076	2375	4451	22	158	51
CRUCKSTON	2089	2077	2376	4453	23	159	53
CRUCKSTON	2090	2078	2377	4455	24	160	55
CRUCKSTON	2091	2079	2378	4457	25	161	57
CRUCKSTON	2092	2080	2379	4459	26	162	59
CRUCKSTON	2093	2081	2380	4461	27	163	61
CRUCKSTON	2094	2082	2381	4463	28	164	63
CRUCKSTON	2095	2083	2382	4465	29	165	65
CRUCKSTON	2096	2084	2383	4467	30	166	67
CRUCKSTON	2097	2085	2384	4469	31	167	69
CRUCKSTON	2098	2086	2385	4471	32	168	71
CRUCKSTON	2099	2087	2386	4473	33	169	73
CRUCKSTON	2100	2088	2387	4475	34	170	75
CRUCKSTON	2101	2089	2388	4477	35	171	77
CRUCKSTON	2102	2090	2389	4479	36	172	79
CRUCKSTON	2103	2091	2390	4481	37	173	81
CRUCKSTON	2104	2092	2391	4483	38	174	83
CRUCKSTON	2105	2093	2392	4485	39	175	85
CRUCKSTON	2106	2094	2393	4487	40	176	87
CRUCKSTON	2107	2095	2394	4489	41	177	89
CRUCKSTON	2108	2096	2395	4491	42	178	91
CRUCKSTON	2109	2097	2396	4493	43	179	93
CRUCKSTON	2110	2098	2397	4495	44	180	95
CRUCKSTON	2111	2099	2398	4497	45	181	97
CRUCKSTON	2112	2100	2399	4499	46	182	99
CRUCKSTON	2113	2101	2400	4501	47	183	101
CRUCKSTON	2114	2102	2401	4503	48	184	103
CRUCKSTON	2115	2103	2402	4505	49	185	105
CRUCKSTON	2116	2104	2403	4507	50	186	107
CRUCKSTON	2117	2105	2404	4509	51	187	109
CRUCKSTON	2118	2106	2405	4511	52	188	111
CRUCKSTON	2119	2107	2406	4513	53	189	113
CRUCKSTON	2120	2108	2407	4515	54	190	115
CRUCKSTON	2121	2109	2408	4517	55	191	117
CRUCKSTON	2122	2110	2409	4519	56	192	119
CRUCKSTON	2123	2111	2410	4521	57	193	121
CRUCKSTON	2124	2112	2411	4523	58	194	123
CRUCKSTON	2125	2113	2412	4525	59	195	125
CRUCKSTON	2126	2114	2413	4527	60	196	127
CRUCKSTON	2127	2115	2414	4529	61	197	129
CRUCKSTON	2128	2116	2415	4531	62	198	131
CRUCKSTON	2129	2117	2416	4533	63	199	133
CRUCKSTON	2130	2118	2417	4535	64	200	135
CRUCKSTON	2131	2119	2418	4537	65	201	137
CRUCKSTON	2132	2120	2419	4539	66	202	139
CRUCKSTON	2133	2121	2420	4541	67	203	141
CRUCKSTON	2134	2122	2421	4543	68	204	143
CRUCKSTON	2135	2123	2422	4545	69	205	145
CRUCKSTON	2136	2124	2423	4547	70	206	147
CRUCKSTON	2137	2125	2424	4549	71	207	149
CRUCKSTON	2138	2126	2425	4551	72	208	151
CRUCKSTON	2139	2127	2426	4553	73	209	153
CRUCKSTON	2140	2128	2427	4555	74	210	155
CRUCKSTON	2141	2129	2428	4557	75	211	157
CRUCKSTON	2142	2130	2429	4559	76	212	159
CRUCKSTON	2143	2131	2430	4561	77	213	161
CRUCKSTON	2144	2132	2431	4563	78	214	163
CRUCKSTON	2145	2133	2432	4565	79	215	165
CRUCKSTON	2146	2134	2433	4567	80	216	167
CRUCKSTON	2147	2135	2434	4569	81	217	169
CRUCKSTON	2148	2136	2435	4571	82	218	171
CRUCKSTON	2149	2137	2436	4573	83	219	173
CRUCKSTON	2150	2138	2437	4575	84	220	175
CRUCKSTON	2151	2139	2438	4577	85	221	177
CRUCKSTON	2152	2140	2439	4579	86	222	179
CRUCKSTON	2153	2141	2440	4581	87	223	181
CRUCKSTON	2154	2142	2441	4583	88	224	183
CRUCKSTON	2155	2143	2442	4585	89	225	185
CRUCKSTON	2156	2144	2443	4587	90	226	187
CRUCKSTON	2157	2145	2444	4589	91	227	189
CRUCKSTON	2158	2146	2445	4591	92	228	191
CRUCKSTON	2159	2147	2446	4593	93	229	193
CRUCKSTON	2160	2148	2447	4595	94	230	195
CRUCKSTON	2161	2149	2448	4597	95	231	197
CRUCKSTON	2162	2150	2449	4599	96	232	199
CRUCKSTON	2163	2151	2450	4601	97	233	201
CRUCKSTON	2164	2152	2451	4603	98	234	203
CRUCKSTON	2165	2153	2452	4605	99	235	205
CRUCKSTON	2166	2154	2453	4607	100	236	207
CRUCKSTON	2167	2155	2454	4609	101	237	209
CRUCKSTON	2168	2156	2455	4611	102	238	211
CRUCKSTON	2169	2157	2456	4613	103	239	213
CRUCKSTON	2170	2158	2457	4615	104	240	215
CRUCKSTON	2171	2159	2458	4617	105	241	217
CRUCKSTON	2172	2160	2459	4619	106	242	219
CRUCKSTON	2173	2161	2460	4621	107	243	221
CRUCKSTON	2174	2162	2461	4623	108	244	223
CRUCKSTON	2175	2163	2462	4625	109	245	225
CRUCKSTON	2176	2164	2463	4627	110	246	227
CRUCKSTON	2177	2165	2464	4629	111	247	229
CRUCKSTON	2178	2166	2465	4631	112	248	231
CRUCKSTON	2179	2167	2466	4633	113	249	233
CRUCKSTON	2180	2168	2467	4635	114	250	235
CRUCKSTON	2181	2169	2468	4637	115	251	237
CRUCKSTON	2182	2170	2469	4639	116	252	239
CRUCKSTON	2183	2171	2470	4641	117	253	241
CRUCKSTON	2184	2172	2471	4643	118	254	243
CRUCKSTON	2185	2173	2472	4645	119	255	245
CRUCKSTON	2186	2174	2473	4647	120	256	247
CRUCKSTON	2187	2175	2474	4649	121	257	249
CRUCKSTON	2188	2176	2475	4651	122	258	251
CRUCKSTON	2189	2177	2476	4653	123	259	253
CRUCKSTON	2190	2178	2477	4655	124	260	255
CRUCKSTON	2191	2179	2478	4657	125	261	257
CRUCKSTON	2192	2180	2479	4659	126	262	259
CRUCKSTON	2193	2181	2480	4661	127	263	261
CRUCKSTON	2194	2182	2481	4663	128	264	263
CRUCKSTON	2195	2183	2482	4665	129	265	265
CRUCKSTON	2196	2184	2483	4667	130	266	267
CRUCKSTON	2197	2185	2484	4669	131	267	269
CRUCKSTON	2198	2186	2485	4671	132	268	271
CRUCKSTON	2199	2187	2486	4673	133	269	273
CRUCKSTON	2200	2188	2487	4675	134	270	275
CRUCKSTON	2201	2189	2488	4677	135	271	277
CRUCKSTON	2202	2190	2489	4679	136	272	279
CRUCKSTON	2203	2191	2490	4681	137	273	281
CRUCKSTON	2204	2192	2491	4683	138	274	283
CRUCKSTON	2205	2193	2492	4685	139	275	285
CRUCKSTON	2206	2194	2493	4687	140	276	287
CRUCKSTON	2207	2195	2494	4689	141	277	289
CRUCKSTON	2208	2196	2495	4691	142	278	291
CRUCKSTON	2209	2197	2496	4693	143	279	293
CRUCKSTON	2210	2198	2497	4695	144	280	295
CRUCKSTON	2211	2199	2498	4697	145	281	297
CRUCKSTON	2212	2200	2499	4699	146	282	299
CRUCKSTON	2213	2201	2500	4701	147	283	301
CRUCKSTON	2214	2202	2501	4703	148	284	303
CRUCKSTON	2215	2203	2502	4705	149	285	305
CRUCKSTON	2216	2204	2503	4707	150	286	307
CRUCKSTON	2217	2205	2504	4709	151	287	309
CRUCKSTON	2218	2206	2505	4711	152	288	311
CRUCKSTON	2219	2207	2506	4713	153	289	313
CRUCKSTON	2220	2208	2507	4715	154	290	315
CRUCKSTON	2221	2209	2508	4717	155	291	317
CRUCKSTON	2222	2210	2509	4719	156	292	319
CRUCKSTON	2223	2211	2510	4721	157	293	321
CRUCKSTON	2224	2212	2511	4723	158	294	323
CRUCKSTON	2225	2213	2512	4725	159	295	325
CRUCKSTON	2226	2214	2513	4727	160	296	327
CRUCKSTON	2227	2215	2514	4729	161	297	329
CRUCKSTON	2228	2216	2515	4731	162	298	331
CRUCKSTON	2229	2217	2516	4733	163	299	333
CRUCKSTON	2230	2218	2517	4735	164	300	335
CRUCKSTON	2231	2219	2518	4737	165	301	337
CRUCKSTON	2232	2220	2519	4739	166	302	339
CRUCKSTON	2233	2221	2520	4741	167	303	341
CRUCKSTON	2234	2222	2521	4743	168	304	343
CRUCKSTON	2235	2223	2522	4745	169	305	345
CRUCK							

TABLE 5.—SUMMARY OF SEED YIELD IN PERCENT OF THE MEAN OF THE 5 CHECK VARIETIES DURING 1979

C.I. NO	OVERALL AVERAGE		L A M B E R T		M O R R I S		C R O O K I N G		B R O O K I N G		F A R G C		M I N O T		M O R D E N		W I N N I P E G		S I D N E Y		S A S K A T O O N		S T E P H E N	
	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE	EARLY	LATE
189	88	86	82	80	72	67	96	91	88	84	115	83	54	87	94	95	95	82	95	82	95	78	78	
2522	101	105	86	97	109	108	113	96	105	105	87	106	112	105	89	104	104	105	103	109	104	105		
2776	99	104	100	108	103	105	188	96	101	84	96	99	111	111	103	103	114	102	102	109	109	197		
2814	107	105	115	105	102	106	105	112	111	128	94	100	149	114	102	101	122	102	102	122	106	106		
2888	103	116	117	110	115	124	158	103	97	107	102	108	113	95	112	106	192	110	113	110	114	114		
2889	102	122	106	107	110	115	107	157	105	121	115	95	105	105	113	113	121	109	109	109	109	109		
2894	101	96	107	83	104	125	106	106	91	113	105	102	125	121	107	91	114	114	114	114	114	114		
2895	97	103	78	90	102	53	53	100	97	97	91	108	115	89	103	102	107	115	115	115	115	115		
2896	109	114	102	104	111	116	107	106	104	101	125	110	120	108	132	102	119	116	116	116	116	116		
2897	98	108	94	91	103	115	105	104	100	85	87	98	114	96	120	95	83	104	104	104	104	104		
2908	105	105	100	93	109	104	114	58	54	54	103	103	114	118	118	102	96	122	122	122	122	122		
2909	57	100	87	99	106	102	97	99	100	90	94	93	105	103	109	86	106	106	106	106	106	106		
2910	103	97	88	101	110	88	104	103	100	106	115	88	103	100	116	109	123	110	123	123	123	123		
2911	100	90	99	80	95	90	104	107	102	121	104	94	65	98	105	97	121	102	121	121	121	121		
2912	105	95	101	108	112	89	106	108	101	99	94	104	111	110	113	102	82	121	121	121	121	121		
2913	106	113	105	102	107	105	121	103	109	121	104	93	116	100	104	95	130	107	107	107	107	107		
2914	103	102	103	97	111	95	102	106	93	116	75	106	102	105	122	99	105	108	108	108	108	108		
2915	102	110	104	103	105	96	92	105	95	124	116	103	147	102	108	102	105	120	120	120	120	120		
2916	103	104	103	107	105	88	107	103	95	114	110	109	115	105	112	102	102	106	106	106	106	106		
2917	101	102	81	97	105	87	95	102	95	108	101	104	115	109	96	102	100	104	104	104	104	104		
2918	97	103	78	102	99	98	74	102	94	95	116	94	115	107	120	104	104	104	104	104	104	104		
2919	97	109	83	103	109	109	79	93	90	84	122	102	124	100	107	101	101	107	107	107	107	107		
2920	104	113	113	103	106	102	82	104	121	121	105	58	118	118	118	99	126	116	116	116	116	116		
2921	102	106	125	118	107	111	93	108	105	85	100	115	115	101	104	99	124	109	109	109	109	109		

TABLE 6.—STATE AVERAGES OVER 1 YEAR

CI	MINNESOTA		SOUTH DAKOTA		NORTH DAKOTA		MANITOBA		OTHERS		ALL STATIONS	
	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL
389	1628	1378	1586	2164	1184	1028	1145	1644	1751	1680	881	1454
2522	2017	2221	2051	2332	1145	1055	1122	1986	2112	2028	924	1667
2776	1953	2143	1585	2279	1147	1147	1220	1857	2073	1929	905	1639
2814	2104	1961	2080	2663	1350	1555	1401	1992	2126	1760	948	1778
2887	2178	2541	2338	2461	1166	1303	1200	1926	2102	1984	1009	1747
2888	2064	2355	2112	2299	1295	1473	1339	1743	1953	1816	1053	1699
2889	2066	2352	2147	2513	1230	1374	1266	1834	2328	1999	884	1690
2894	1908	1751	1982	2520	1165	1102	1149	2011	2278	2033	1037	1665
2895	1866	1903	1872	2373	1208	1184	1202	1881	2216	1992	952	1615
2896	2123	2369	2164	2514	1398	1233	1357	2049	2232	2110	1051	1810
2897	1965	2362	2031	2468	1103	1031	1085	1830	2133	1931	968	1631
2908	2113	2131	2120	2325	1179	1152	1172	2063	2128	2084	954	1736
2909	1949	2098	1973	2349	1163	1092	1145	1829	1953	1870	877	1615
2910	2014	1796	1578	2453	1369	1291	1350	1753	1915	1807	1042	1709
2911	1858	1843	1889	2557	1336	1476	1371	1798	1294	1630	929	1654
2912	2154	1829	2095	2573	1123	1201	1142	2000	2074	2025	985	1744
2913	2150	2156	2453	2453	1407	1471	1423	1801	2165	1922	940	1762
2914	2051	1943	2034	2518	1120	1407	1192	1989	1905	1961	1001	1701
2915	1996	1959	1590	2508	1247	1505	1311	1927	2182	2012	955	1692
2916	1995	1796	1962	2450	1219	1385	1261	2023	2150	2065	983	1700
2917	1986	1791	1953	2431	1202	1310	1229	1992	2158	2047	858	1666
2918	1793	2006	1829	2426	1256	1151	1230	1876	2142	1964	1024	1612
2919	1884	2241	1944	2221	1159	1028	1126	1902	2310	2038	961	1603
2920	2028	2100	2040	2472	1373	1471	1397	1898	2210	2002	923	1721
2921	2169	2281	2188	2574	1351	1030	1271	2052	2152	2085	542	1805

TABLE 7.—STATE AVERAGES OVER 2 YEARS

CI	MINNESOTA		SOUTH DAKOTA		NORTH DAKOTA		MANITOBA		OTHERS		ALL STATIONS	
	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL	EARLY	LATE	ALL
389	1611	1254	1522	1583	1188	701	1066	1570	1482	1537	805	1387
2522	1879	1970	1902	1931	1243	817	1136	1841	1830	1837	845	1584
2776	1856	1856	1856	1862	1331	910	1226	1722	1786	1746	902	1574
2814	1957	1494	1871	2006	1334	863	1216	1842	1298	1638	858	1653
2887	2003	2167	2044	1922	1321	1120	1271	1741	1834	1776	932	1635
2888	1934	2037	1560	2000	1265	1094	1223	1767	1711	1746	943	1615
2889	1996	2159	1962	1972	1288	920	1196	1725	1938	1805	839	1581
2894	1838	1705	1806	1986	1277	931	1190	1852	1697	1794	897	1593
2895	1806	1801	1805	1975	1252	906	1166	1828	1858	1839	865	1566
2896	2002	2045	2013	2030	1336	944	1238	1883	1778	1844	901	1672
2897	1871	2017	1908	1849	1192	822	1099	1708	1858	1764	868	1539

TABLE 8.—SUMMARY OF AGRONOMIC DATA OTHER THAN YIELD FOR VARIETIES OF FLAX GROWN IN THE COOPERATIVE REGIONAL TRIALS IN 1979

VARIETY OR CI NO.	DAYS FROM SOWING TO									
	FIRST BLOOM		FULL BLOOM		MATURITY		HEIGHT		LODGING ¹	
	AVG. (DAYS)	NO. OF TESTS	AVG. (DAYS)	NO. OF TESTS	AVG. (DAYS)	NO. OF TESTS	AVG. (CM)	NO. OF TESTS	AVG.	NO. OF TESTS
BISON	48	11	50	6	99	4	65	14	3.2	4
LINOTT	46	11	48	6	100	4	62	14	1.7	4
CULBERT	46	11	48	6	100	4	60	14	2.1	4
DUFFERIN	52	11	54	6	104	4	69	14	2.5	4
2887	47	11	48	6	97	4	64	14	1.9	4
2888	48	11	49	6	101	4	64	14	2.3	4
2889	46	11	47	6	98	4	60	14	1.8	4
2894	48	11	49	6	99	4	64	14	2.3	4
2895	48	11	48	6	97	4	62	14	2.1	4
2896	49	11	50	6	97	4	61	14	2.1	4
2897	48	11	49	6	98	4	63	14	2.5	4
2908	48	11	50	6	98	4	63	14	2.3	4
2909	48	11	49	6	98	4	66	14	2.0	4
2910	48	11	49	6	102	4	65	14	2.9	4
2911	50	11	52	6	105	4	71	14	3.5	4
2912	48	11	49	6	100	4	65	14	3.2	4
2913	49	11	49	6	101	4	64	14	3.2	4
2914	50	11	51	6	101	4	65	14	1.5	4
2915	48	11	49	6	102	4	65	14	1.7	4
2916	48	11	48	6	98	4	64	14	2.8	4
2917	49	11	50	6	102	4	65	14	2.3	4
2918	47	11	49	6	102	4	63	14	3.5	4
2919	44	11	46	6	98	4	60	14	1.9	4
2920	46	11	48	6	103	4	67	14	2.9	4
2921	51	11	52	6	103	4	67	14	1.5	4

¹ Rated on a scale; 1 = best, 9 = poorest.

TABLE 9.—SUMMARY OF RESISTANCE TO PASMO FOR VARIETIES GROWN IN COOPERATIVE REGIONAL TRIALS IN 1979

VARIETY OR CI NO.	BROOKINGS, SD			MORRIS, MN		LAMBERTON
	PANICLE	TOP OF STEM	BOTTOM OF STEM	EARLY	LATE	EARLY
BISON	1	2	5	3	2	4
LINOTT	0	1	3	6	3	7
CULBERT	0	1	3	4	1	3
DUFFERIN	0	0	2	6	2	7
2887	0	1	3	7	3	6
2888	0	0	3	7	4	6
2889	0	0	4	8	5	6
2894	0	1	3	8	5	7
2895	0	1	4	5	4	7
2896	0	0	4	5	3	5
2897	0	1	4	5	1	6
2908	0	1	3	6	2	6
2909	0	1	4	2	1	3
2910	0	1	3	3	1	5
2911	0	1	3	3	2	5
2912	0	0	4	2	2	5
2913	0	0	3	3	2	5
2914	0	0	3	2	4	4
2915	0	1	3	5	3	6
2916	3	2	5	6	7	7
2917	0	0	2	5	3	6
2918	1	2	5	6	4	7
2919	0	2	4	6	3	6
2920	0	0	2	5	3	6
2921	0	0	2	7	2	8

TABLE 10.—SUMMARY OF RESISTANCE TO FUSARIUM WILT FOR VARIETIES GROWN IN COOPERATIVE TRIALS IN 1979 AND A 2- AND 3-YEAR MEAN

VARIETY OR C.I. NO.	1979				TWO-YEAR MEAN			THREE-YEAR MEAN		
	ST. PAUL, MN BREEDING	PL. PATH	FARGO ND	MORDEN MAN.	ST. PAUL, MN BREEDING	FARGO ND	MORDEN MAN.	ST. PAUL, MN BREEDING	FARGO ND	MORDEN MAN.
BISON	3	4	2	2	3	3	2	4	3	2
LINOTT	5	6	5	4	6	6	4	6	6	4
CULBERT	1	4	4	4	2	5	4	2	5	4
DUFFERIN	2	3	3	2	2	3	2	2	2	2
2887	3	5	3	4	3	4	4			
2888	3	3	2	3	3	3	3			
2889	3	6	3	4	3	4	4			
2894	7	7	5	3	7	6	3			
2895	6	5	4	4	6	5	2			
2896	6	5	4	2	6	6	2			
2897	7	6	5	3	7	5	3			
2908	5	5	3	4						
2909	6	7	5	4						
2910	2	4	3	3						
2911	2	4	4	3						
2912	4	4	4	3						
2913	3	5	2	3						
2914	4	7	3	2						
2915	2	5	1	3						
2916	3	6	2	4						
2917	1	2	1	3						
2918	1	4	1	2						
2919	1	3	1	4						
2920	1	3	1	2						
2921	5	5	5	3						

TABLE 11.—SUMMARY OF OIL PERCENTAGES OF FLAXSEED ENTRIES IN THE 1979 REGIONAL TRIALS, 2- AND 3-YEAR MEAN.

VARIETY OR C.I. NO.	MORRIS	BROOK- INGS	FARGO	CARRING- TON	MINOT	MORDEN	MORDEN	SIDNEY	MEAN % 8	TWO- YEAR	THREE- YEAR
	(E)	(E)	(E)	(E)	(E)	(E)	(L)	(E)	LOCATIONS	MEAN	MEAN
BISON	44.2	45.7	43.1	43.3	44.1	44.9	45.7	43.4	44.3	43.7	42.9
LINOTT	45.7	46.1	45.7	45.2	44.4	45.2	45.4	43.2	45.1	44.4	43.7
CULBERT	46.1	46.2	44.8	45.5	45.1	45.5	46.0	44.3	45.4	44.8	43.9
DUFFERIN	46.4	47.7	46.4	46.0	46.0	47.3	48.2	43.4	46.4	45.5	44.6
2887	44.7	45.7	44.8	43.7	44.4	45.2	45.8	42.3	44.6	44.0	
2888	44.9	44.3	44.3	43.8	43.9	44.2	44.0	41.7	43.9	43.3	
2889	44.5	46.2	45.3	45.9	45.2	45.5	46.2	42.7	45.2	44.5	
2894	45.9	46.1	45.1	45.6	45.4	46.4	45.8	42.7	45.4	44.8	
2895	44.8	46.3	45.8	44.9	44.7	45.3	45.1	42.8	45.0	44.5	
2896	45.7	46.8	45.1	45.8	45.0	46.8	46.3	42.1	45.5	44.6	
2897	45.5	47.1	45.4	45.5	45.0	45.6	45.8	42.8	45.3	44.5	
2908	45.4	45.8	46.0	45.4	45.0	46.1	45.3	42.3	45.2		
2909	45.6	46.2	45.5	45.1	44.8	45.1	45.1	42.8	45.0		
2910	44.9	45.0	44.5	45.3	45.1	45.5	45.7	41.0	44.6		
2911	45.6	46.0	45.9	45.7	45.0	45.6	44.7	42.3	45.1		
2912	45.9	46.3	45.2	44.4	44.7	44.7	44.8	41.6	44.7		
2913	46.5	47.1	45.3	45.6	46.0	45.7	44.9	42.2	45.4		
2914	46.7	47.8	45.6	46.5	46.5	46.7	46.9	43.5	46.3		
2915	44.6	45.6	45.8	44.1	45.8	46.3	45.2	41.7	44.9		
2916	46.0	45.4	45.1	45.9	44.8	45.7	44.7	42.3	45.0		
2917	47.3	45.9	46.2	46.6	48.5	48.8	48.3	44.3	47.0		
2918	48.7	48.8	48.6	48.6	48.5	48.6	48.3	45.4	48.2		
2919	48.6	48.3	48.4	47.8	47.4	48.6	48.7	44.1	47.7		
2920	47.1	48.1	47.1	46.6	47.2	47.3	47.8	43.8	46.9		
2921	42.2	46.2	44.8	44.9	45.6	46.1	44.3	41.5	44.5		

TABLE 12.—SUMMARY OF IODINE VALUES FOR FLAXSEED PRODUCED AT FOUR LOCATIONS
IN THE 1979 REGIONAL TRIALS

VARIETY OR C.I. NO.	FARGO	MORRIS	BROOKINGS	MORDEN
BISON	182	172	174	179
LINOTT	186	184	180	185
CULBERT	193	192	184	195
DUFFERIN	183	177	178	185
2887	186	186	178	190
2888	186	180	177	184
2889	184	178	178	188
2894	183	178	179	180
2895	183	179	180	185
2896	186	179	178	188
2897	181	178	176	184
2908	188	176	176	184
2909	187	178	179	181
2910	187	175	179	185
2911	183	175	173	181
2912	187	179	173	185
2913	186	182	173	185
2914	186	172	179	185
2915	186	178	180	184
2916	186	182	184	190
2917	188	174	179	187
2918	190	171	181	185
2919	184	174	170	185
2920	188	181	178	186
2921	187	183	179	185

TABLE 13.—SUMMARY OF RUST RESISTANCE DATA FOR FLAX VARIETIES GROWN IN COOPERATIVE REGIONAL TRIALS IN 1979

VARIETY OR C.I. NO.	IDENTIFIED OR ASSUMED RUST GENES	REACTION TO FLAX RUST RACES ¹													
		371	1	22	191	259	73	263	97	105	355	358	X3	X10	X36
BISON	L ₁	S	S	S	S	S	S	S							
LINOTT	L ₁ M	R	R	S	R	S	R	R							
CULBERT	L ₁ N ₁	R	R	S	S	R	R	R							
DUFFERIN	N ₁ P, Raja	R	R	S	R	R	R	R							
2887	L ₁ MN ₁	R	R	S	R	R	R	R					S	S	
2888		S	R	S	R	R	R	S					R	R	
2889		M(25)	R	S	R	R	R	R					R	R	
2894	L ₁ M ₁ P ₁	R	R	S	R	R	R	R		R	R	S	R		R
2895	L ₁ P ₁	R	R	S	R	R	R	S		R	R	S	R		S
2896	L ₁ M ₁ P ₁	R	R	S	R	R	R	R		R	R	S	R		R
2897	L ₁ M ₁ P ₁	R	R	S	R	R	R	R		R	R	S	R		R
2908		R	R	S	R	R	R	R		S	M	S	S		R
2909	L ₁ P ₁	R	R	S	R	R	R	S		R	R	S	R		M(50)
2910	N ₁ M ₁ + —M ₁ P ₁	R	R	S	M	R	R	R	S	M(50)		S			
2911	—M ₁ P ₁	R	R	S	R	R	R	R	M(31)	M(24)		S			
2912		M(33)	R	S	R	S	R	R					S	S	
2913	L ₁ MN ₁ + L ₁ MP	R	R	S	R	R	R	R					S	S	
2914	L ₁ MP + L ₁ MN ₁	R	R	S	R	R	R	R					S	M(63)	
2915	L ₁	R	R	S	S	S	R	S							
2916	L ₁ MN ₁ PL ₁	R	R	S	R	R	R	R					S	S	
2917	L ₁ N ₁	R	R	S	S	R	R	S							
2918		S	R	S	S	S	S	S							
2919	N ₁ P	S	R	S	R	R	R	S							
2920	L ₁ N ₁ P	R	R	S	R	R	R	S							
2921		R	R	S	R	R	R	R							

¹ S = Susceptible, R = Resistant, M = Segregating (Percentage susceptible in parentheses).

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